III.—SODA LEY FOR DYERS.

The Sum of FIVE GUINEAS *was this Session given to Mr.* C. CAMERON, *of Glasgow, for his mode of* PREPARING SODA LEY *for the use of* DYERS OF TURKEY RED. *The following Communication was received from him on the subject.*

No. 18, Saltmarket Street, Glasgow,
April 7, 1827.

SIR;

I BEG leave to request of you to lay before the Committee the following communication: I hope it is not yet too late. You, Sir, as a man of science, will immediately appreciate its merit.

I am, Sir,

A. Aikin, Esq. &c. &c. &c.

Secretary, &c. &c. CHARLES CAMERON, *Chemist.*

Method of making a cheap Soda Liquor, without Crystallizing, for the use of the Turkey-red Dyers.

As the Turkey-red dyers are the great consumers of the common soda of commerce, it occurred to me, about four months ago, that they might make their own alkali, by the cheap and simple process of decomposing muriate of soda by pearl-ash, and thus procure a liquor equally pure, without the tedious and expensive operation of bringing the soda to the state of crystal. I pointed out the following plan to a Turkey-red dyer here, who immediately put it in practice, and it is now gradually adopting by the trade.

Into a cast-iron boiler capable of holding 450 gallons of water, I put ten hundred weight of pearl-ash (first sort), seven hundred weight muriate of soda, and four

times the weight of the muriate of soda of water, applying heat, and stirring until both are dissolved. After boiling for some time, the muriate of potash begins to crystallize on the surface. As the boiling is still continued, the muriate of potash is rapidly forming, and is lifted out of the vessel by means of a ladle pierced with small holes, and is thrown into a vessel placed in an inclined position, with its end or side a little within the edge of the boiler, which allows any of the liquor that may have been carried over, to drain back again into the pot. The boiling is continued until nearly the whole of the muriate of potash is deposited and taken out. The liquid is then removed into another vessel, either of cast iron or wood lined with lead, and allowed to remain until it has cooled to the temperature of sixty degrees, during which time it parts with the rest of its muriate; it is then run off into another vessel, and diluted with water to twenty degrees specific gravity, more or less at pleasure, which prevents the soda from crystallizing, and gives an uniform strength of liquor, equally pure with the best crystallized soda, and at about half the price. The above weight of pearl-ash and muriate of soda, produces a mineral alkali equivalent in quantity to what is contained in one ton of soda of commerce, the best of which does not exceed 22 per cent.

Present price of soda, 22*l.* per ton.

	£.	s.	d.
Price of pearl-ash, first sort, per ton	28	0	0
14 cwt. of muriate of soda, 30*s.* per ton	1	2	0
	29	2	0
These produce 1¼ tons of muriate of potash, price 5*l.* 10*s.* . . .	6	17	6
Cost of alkali, equivalent to 2 tons of soda	22	4	6

The process is so simple, that one workman can decompose one or more tons per day, dependent on the size of his vessels. As the Turkey-red work consumes from forty to two hundred and fifty tons annually, according to the extent of its establishment, it is of great importance to that valuable manufacture. I can claim no merit in merely decomposing muriate of soda by potash, that is a fact long known; what properly belongs to me is, being the first to point out to the trade a simple and unexpensive method of making their own alkali, without being at the expense of erecting additional premises, and extensive apparatus, required for the purpose of crystallizing; a common boiler and two or three other vessels being all that is requisite.

CHARLES CAMERON.

IV.—MEDICINAL EXTRACTS.

The THANKS *of the Society were voted to* J. HOULTON, *Esq. Grove Place, Lisson Grove, for his method of preparing* VEGETABLE EXTRACTS *for* MEDICINAL USE.

11, Grove Place, Lisson Grove,
March 25, 1826.

SIR;

I BEG to solicit the attention of the Society of Arts to specimens of Extracts of Medicinal Plants, which have been prepared without the aid of artificial heat, and in a more easy and economical method than that ordinarily employed, and which, at the same time, produces an article in no respect inferior to the extracts made in the usual way, but in many points very superior; and it